

DEPARTMENT • OF • WATER • RESOURCES
CALIFORNIA WATER PLAN
♦ UPDATE 2003 ♦

Analyzing US Census Population Data to Department of Water Resource's Detailed Analysis Units

Open ArcView 3.2 and create a new project (see figure 5).

With the View tab active, add the following themes:

- County (.shp)
- DAU (.shp)
- Tgr06101blk00 (.shp) - Tiger files with census block information
 - The first 2 #'s designate the US Census Bureau code for the State.
 - The remaining 3 #'s identify the county within the State (number system begins with 1 and goes by 2's from that point forward...1, 3, 5,...,115.)

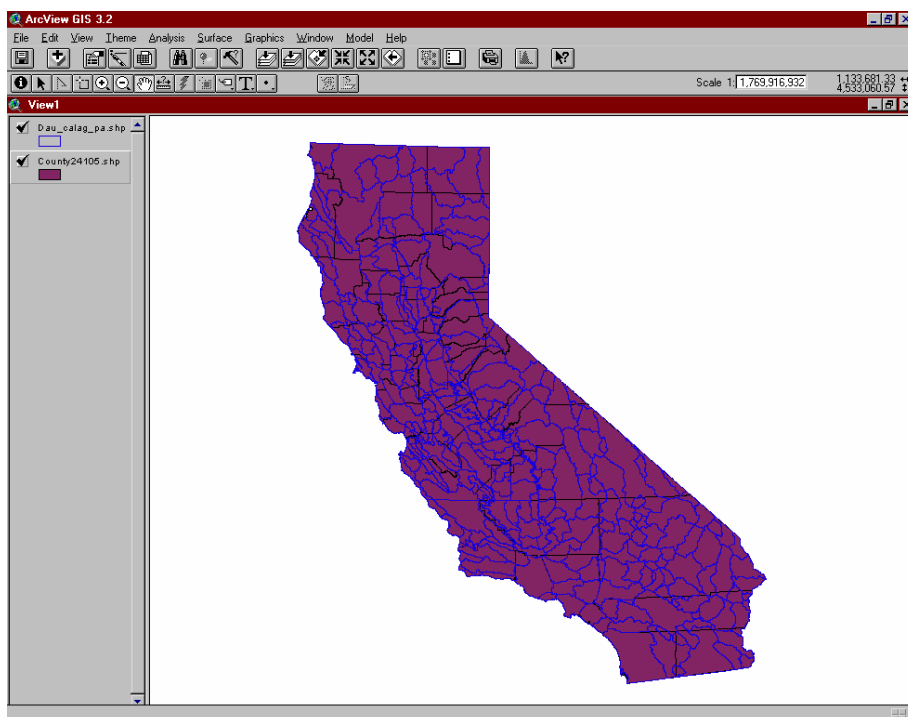


Figure 5.

With the Census block shape file active in the View window, click the menu tool bar labeled "Theme" and next click on "Convert to Shape File". This allows us to create a duplicate of the TGR#####blk00.shp files which leaves a clean file to refer to if errors occur. The naming convention used was: CountyName_block_DAU, i.e. ElDorado_block_DAU.shp (see figure 6).

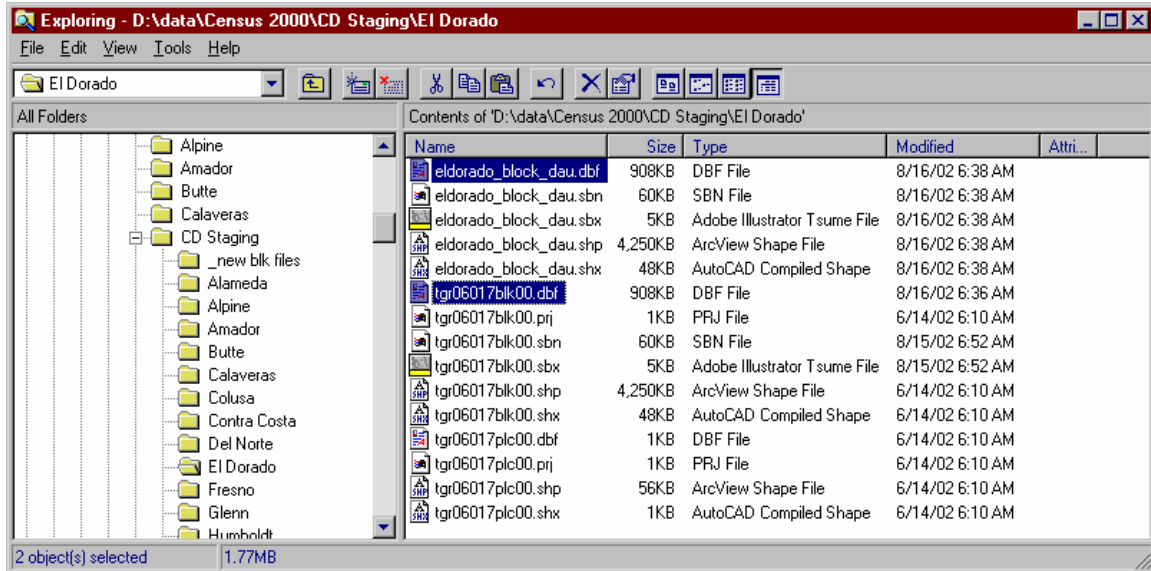


Figure 6.

Once the duplicate theme is created, add the new theme to the project (see figure 7).

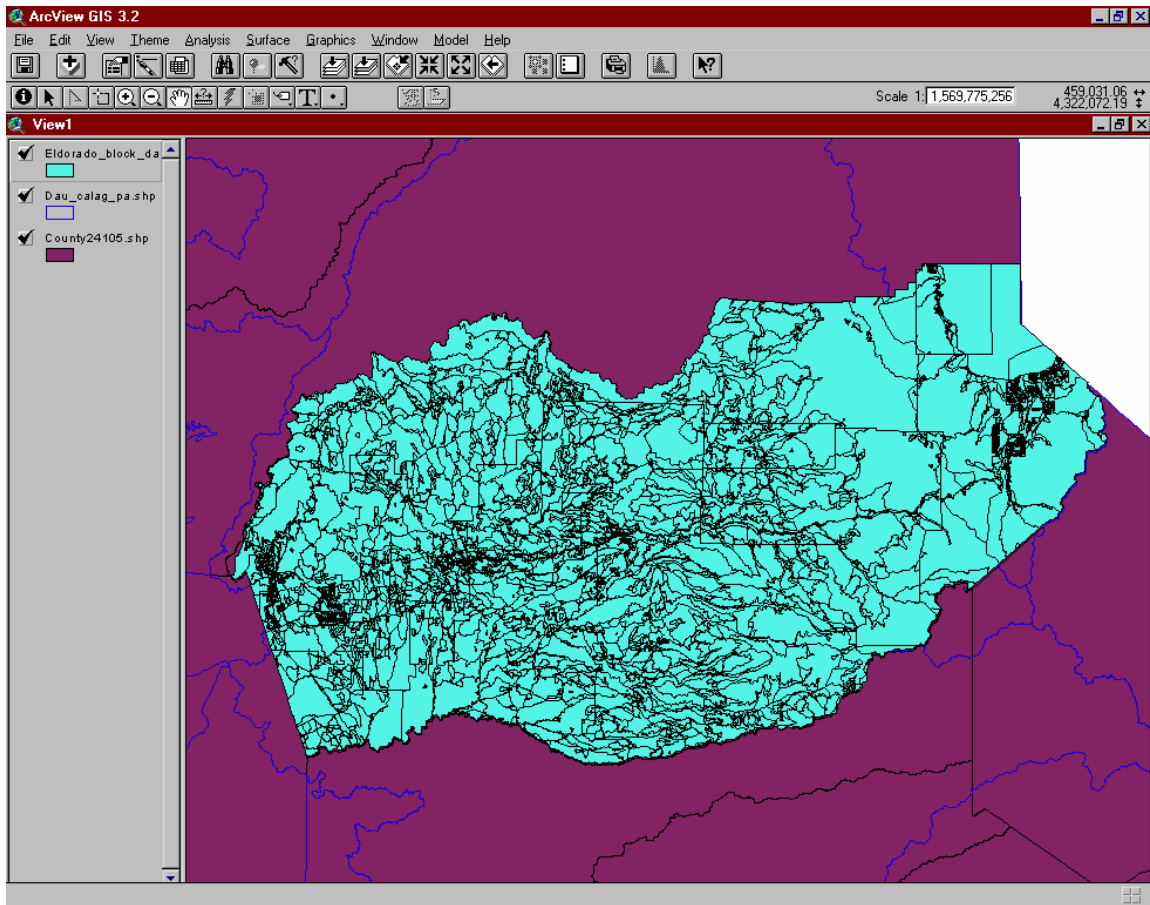


Figure 7.

Highlight new theme then, click the open table button. In the table view, access the edit dropdown menu and start editing the table. Add up to 6 new fields, one at a time, named DAU_1 to DAU_6 (see figure 8). They are numerical in type with 5 spaces preset. < SAVE & SAVE OFTEN>

ArcView GIS 3.2

File Edit Table Window Help

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Attributes of Eldorado_block_dau.shp

Shape	Id	Fipssta	Tract2000	Block20	Stlct	County	Cousub	Pace	Tract	Bkgrp	Block	Pop	Con_pos	Inst_pos	Mil_gns	Day_1	Day_2	Day_3	Day_4	Day_5
Polygon	1	06017	030101	1000	060170301011000	017	93160	99999	030101	1	1000	0	0	0	0	268	0	0	0	0
Polygon	2	06017	030101	1001	060170301011001	017	93160	99999	030101	1	1001	0	0	0	0	268	0	0	0	0
Polygon	3	06017	030101	1002	060170301011002	017	93160	73108	030101	1	1002	0	0	0	0	268	0	0	0	0
Polygon	4	06017	030101	1003	060170301011003	017	93160	73108	030101	1	1003	0	0	0	0	268	0	0	0	0
Polygon	5	06017	030101	1004	060170301011004	017	93160	73108	030101	1	1004	0	0	0	0	268	0	0	0	0
Polygon	6	06017	030101	1005	060170301011005	017	93160	73108	030101	1	1005	0	0	0	0	268	0	0	0	0
Polygon	7	06017	030101	1006	060170301011006	017	93160	73108	030101	1	1006	1	0	0	0	268	0	0	0	0
Polygon	8	06017	030101	1007	060170301011007	017	93160	73108	030101	1	1007	0	0	0	0	268	0	0	0	0
Polygon	9	06017	030101	1008	060170301011008	017	93160	73108	030101	1	1008	1	0	0	0	268	0	0	0	0
Polygon	10	06017	030101	1009	060170301011009	017	93160	73108	030101	1	1009	4	0	0	0	268	0	0	0	0
Polygon	11	06017	030101	1010	060170301011010	017	93160	73108	030101	1	1010	28	0	0	0	268	0	0	0	0
Polygon	12	06017	030101	1011	060170301011011	017	93160	73108	030101	1	1011	150	0	0	0	268	0	0	0	0
Polygon	13	06017	030101	1012	060170301011012	017	93160	73108	030101	1	1012	14	0	0	0	268	0	0	0	0
Polygon	14	06017	030101	1013	060170301011013	017	93160	73108	030101	1	1013	10	0	0	0	268	0	0	0	0
Polygon	15	06017	030101	1014	060170301011014	017	93160	73108	030101	1	1014	0	0	0	0	268	0	0	0	0
Polygon	16	06017	030101	1015	060170301011015	017	93160	73108	030101	1	1015	4	0	0	0	268	0	0	0	0
Polygon	17	06017	030101	1016	060170301011016	017	93160	73108	030101	1	1016	2	0	0	0	268	0	0	0	0
Polygon	18	06017	030101	1017	060170301011017	017	93160	73108	030101	1	1017	15	0	0	0	268	0	0	0	0
Polygon	19	06017	030101	1018	060170301011018	017	93160	73108	030101	1	1018	0	0	0	0	268	0	0	0	0
Polygon	20	06017	030101	1019	060170301011019	017	93160	73108	030101	1	1019	0	0	0	0	268	0	0	0	0
Polygon	21	06017	030101	1020	060170301011020	017	93160	73108	030101	1	1020	2	0	0	0	268	0	0	0	0
Polygon	22	06017	030101	1021	060170301011021	017	93160	73108	030101	1	1021	2	0	0	0	268	0	0	0	0
Polygon	23	06017	030101	1022	060170301011022	017	93160	73108	030101	1	1022	4	0	0	0	268	0	0	0	0
Polygon	24	06017	030101	1023	060170301011023	017	93160	73108	030101	1	1023	6	0	0	0	268	0	0	0	0
Polygon	25	06017	030101	1024	060170301011024	017	93160	73108	030101	1	1024	3	0	0	0	268	0	0	0	0
Polygon	26	06017	030101	1025	060170301011025	017	93160	73108	030101	1	1025	20	0	0	0	268	0	0	0	0
Polygon	27	06017	030102	1000	060170301021000	017	93160	73108	030102	1	1000	4	0	0	0	268	0	0	0	0
Polygon	28	06017	030102	1001	060170301021001	017	93160	73108	030102	1	1001	120	0	0	0	268	0	0	0	0
Polygon	29	06017	030102	1002	060170301021002	017	93160	73108	030102	1	1002	43	0	0	0	268	0	0	0	0
Polygon	30	06017	030102	1003	060170301021003	017	93160	73108	030102	1	1003	23	0	0	0	268	0	0	0	0
Polygon	31	06017	030102	1004	060170301021004	017	93160	73108	030102	1	1004	0	0	0	0	268	0	0	0	0
Polygon	32	06017	030102	1005	060170301021005	017	93160	73108	030102	1	1005	0	0	0	0	268	0	0	0	0
Polygon	33	06017	030102	1006	060170301021006	017	93160	73108	030102	1	1006	2	0	0	0	268	0	0	0	0
Polygon	34	06017	030102	1007	060170301021007	017	93160	73108	030102	1	1007	0	0	0	0	268	0	0	0	0
Polygon	35	06017	030102	1008	060170301021008	017	93160	73108	030102	1	1008	2	0	0	0	268	0	0	0	0
Polygon	36	06017	030102	1009	060170301021009	017	93160	73108	030102	1	1009	2	0	0	0	268	0	0	0	0
Polygon	37	06017	030102	2000	060170301022000	017	93160	73108	030102	2	2000	99	0	0	0	268	0	0	0	0
Polygon	38	06017	030102	2001	060170301022001	017	93160	73108	030102	2	2001	213	0	0	0	268	0	0	0	0

Figure 8.

Once the table has been modified with the new fields, highlight the field named "DAU_1". Now minimize the table leaving the edit table mode active.

Make sure the DAU theme is active in the view window. Using the "select feature" tool with the DAU.shp files active, pick one DAU within the selected county. If done correctly, the DAU should be highlighted in **YELLOW** (see figure 9). The DAU may only partially be in county you are working on, so this process will have to be repeated several times (one at a time per DAU).

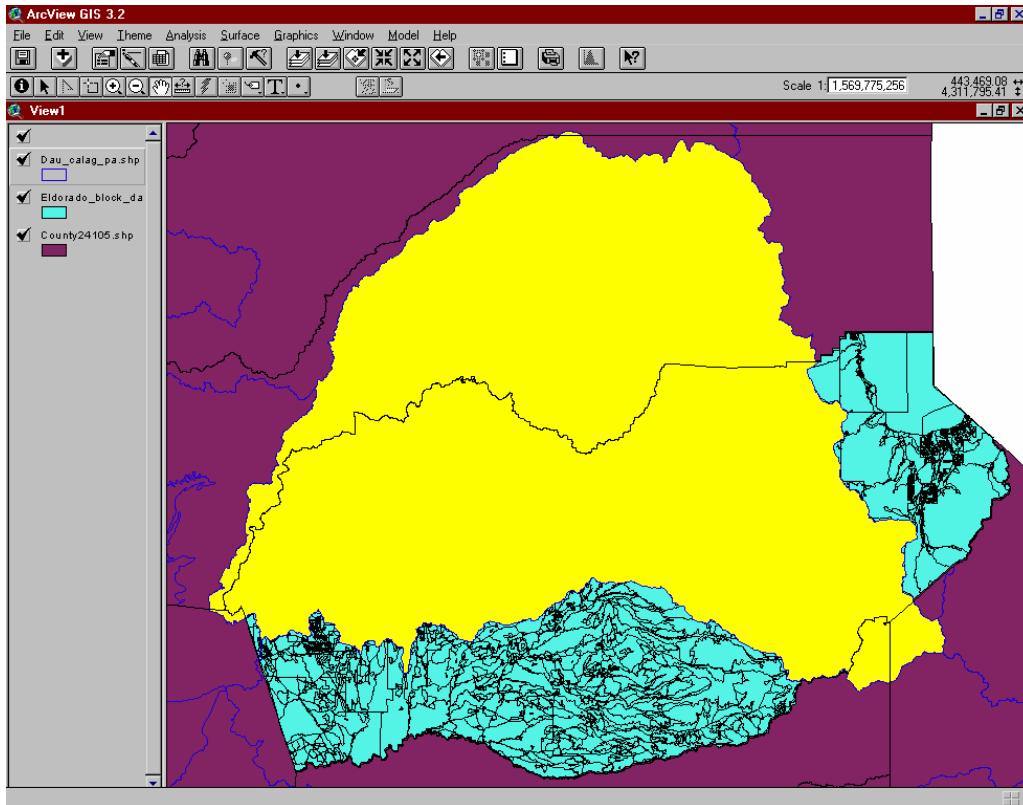


Figure 9.

Next, make the "County_block_dau" theme active. Use the "Theme" pull-down menu and click the "Select by Theme". This opens a new box titled "Select by Theme". Within this box, there are two pull-down menu options. The first (Select features of active themes that), make sure it is set to "Are Completely within". The second menu (the selected features of) should be set to the "County_block_DAU" theme. By doing this, all census blocks completely within the selected DAU become highlighted in **YELLOW** (see figure 10). Next make DAU.shp active and clear the selected theme. Now zoom in on the highlighted blocks and check the borders for those blocks that are in the DAU and physically touch the border. To select these and keep the other selected items, hold down the shift key and click the appropriate block (using the Select Feature button).

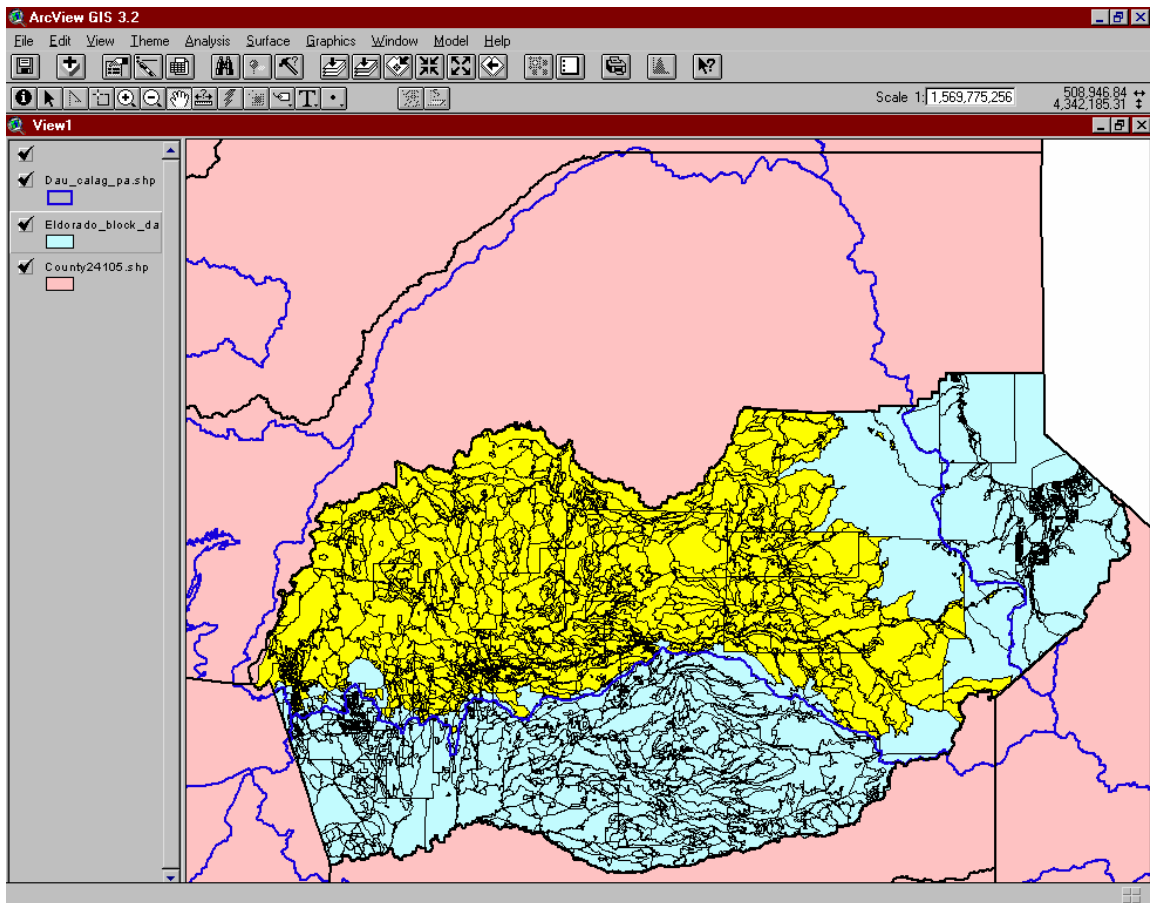


Figure 10.

When you are confident you have all the blocks selected within the specific DAU, open the table again (still in edit mode). Use the promote function to bring all highlighted features to the top (see figure 11). Within edit mode, click on the calculate button. Within the box, put in the DAU number that corresponds with the associated blocks (see figure 12). [Repeat this until all DAUs are accounted for]...then look at the blocks that do not fall completely in one DAU (cross over multiple DAUs) and repeat the process of assigning the appropriate numbers of the DAUs the block occupies. This process is usually done as individual blocks or in groups both large and small.

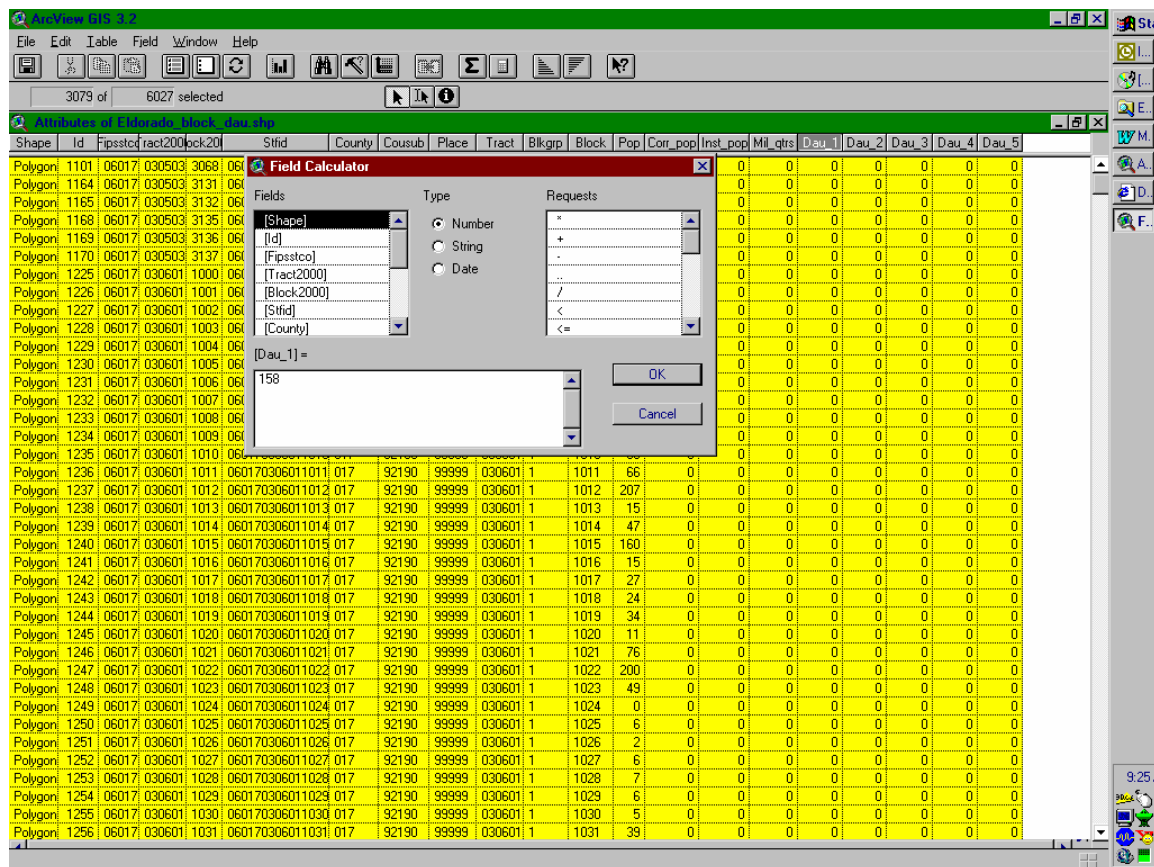


Figure 11.

ArcView GIS 3.2

File Edit Table Field Window Help

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Attributes of Eldorado_block_dau.shp

Shape	Id	Fipsstc	tract200	ock20	Sftid	County	Cousub	Place	Tract	Blkgrp	Block	Pop	Corr_pop	Inst_pop	Mil_qtrs	Dau_1	Dau_2	Dau_3	Dau_4	Dau_5
Polygon	1101	06017	030503	3068	060170305033068	017	93160	99999	030503	3	3068	0	0	0	0	158	0	0	0	0
Polygon	1164	06017	030503	3131	060170305033131	017	93160	99999	030503	3	3131	0	0	0	0	158	0	0	0	0
Polygon	1165	06017	030503	3132	060170305033132	017	93160	99999	030503	3	3132	0	0	0	0	158	0	0	0	0
Polygon	1168	06017	030503	3135	060170305033135	017	93160	99999	030503	3	3135	0	0	0	0	158	0	0	0	0
Polygon	1169	06017	030503	3136	060170305033136	017	93160	99999	030503	3	3136	0	0	0	0	158	0	0	0	0
Polygon	1170	06017	030503	3137	060170305033137	017	93160	99999	030503	3	3137	0	0	0	0	158	0	0	0	0
Polygon	1225	06017	030601	1000	060170306011000	017	92190	99999	030601	1	1000	155	0	0	0	158	0	0	0	0
Polygon	1226	06017	030601	1001	060170306011001	017	92190	99999	030601	1	1001	0	0	0	0	158	0	0	0	0
Polygon	1227	06017	030601	1002	060170306011002	017	92190	99999	030601	1	1002	16	0	0	0	158	0	0	0	0
Polygon	1228	06017	030601	1003	060170306011003	017	92190	99999	030601	1	1003	343	0	0	0	158	0	0	0	0
Polygon	1229	06017	030601	1004	060170306011004	017	92190	99999	030601	1	1004	0	0	0	0	158	0	0	0	0
Polygon	1230	06017	030601	1005	060170306011005	017	92190	99999	030601	1	1005	12	0	0	0	158	0	0	0	0
Polygon	1231	06017	030601	1006	060170306011006	017	92190	99999	030601	1	1006	3	0	0	0	158	0	0	0	0
Polygon	1232	06017	030601	1007	060170306011007	017	92190	99999	030601	1	1007	23	0	0	0	158	0	0	0	0
Polygon	1233	06017	030601	1008	060170306011008	017	92190	99999	030601	1	1008	30	0	0	0	158	0	0	0	0
Polygon	1234	06017	030601	1009	060170306011009	017	92190	99999	030601	1	1009	74	0	0	0	158	0	0	0	0
Polygon	1235	06017	030601	1010	060170306011010	017	92190	99999	030601	1	1010	35	0	0	0	158	0	0	0	0
Polygon	1236	06017	030601	1011	060170306011011	017	92190	99999	030601	1	1011	66	0	0	0	158	0	0	0	0
Polygon	1237	06017	030601	1012	060170306011012	017	92190	99999	030601	1	1012	207	0	0	0	158	0	0	0	0
Polygon	1238	06017	030601	1013	060170306011013	017	92190	99999	030601	1	1013	15	0	0	0	158	0	0	0	0
Polygon	1239	06017	030601	1014	060170306011014	017	92190	99999	030601	1	1014	47	0	0	0	158	0	0	0	0
Polygon	1240	06017	030601	1015	060170306011015	017	92190	99999	030601	1	1015	160	0	0	0	158	0	0	0	0
Polygon	1241	06017	030601	1016	060170306011016	017	92190	99999	030601	1	1016	15	0	0	0	158	0	0	0	0
Polygon	1242	06017	030601	1017	060170306011017	017	92190	99999	030601	1	1017	27	0	0	0	158	0	0	0	0
Polygon	1243	06017	030601	1018	060170306011018	017	92190	99999	030601	1	1018	24	0	0	0	158	0	0	0	0
Polygon	1244	06017	030601	1019	060170306011019	017	92190	99999	030601	1	1019	34	0	0	0	158	0	0	0	0
Polygon	1245	06017	030601	1020	060170306011020	017	92190	99999	030601	1	1020	11	0	0	0	158	0	0	0	0
Polygon	1246	06017	030601	1021	060170306011021	017	92190	99999	030601	1	1021	76	0	0	0	158	0	0	0	0
Polygon	1247	06017	030601	1022	060170306011022	017	92190	99999	030601	1	1022	200	0	0	0	158	0	0	0	0
Polygon	1248	06017	030601	1023	060170306011023	017	92190	99999	030601	1	1023	49	0	0	0	158	0	0	0	0
Polygon	1249	06017	030601	1024	060170306011024	017	92190	99999	030601	1	1024	0	0	0	0	158	0	0	0	0
Polygon	1250	06017	030601	1025	060170306011025	017	92190	99999	030601	1	1025	6	0	0	0	158	0	0	0	0
Polygon	1251	06017	030601	1026	060170306011026	017	92190	99999	030601	1	1026	2	0	0	0	158	0	0	0	0
Polygon	1252	06017	030601	1027	060170306011027	017	92190	99999	030601	1	1027	6	0	0	0	158	0	0	0	0
Polygon	1253	06017	030601	1028	060170306011028	017	92190	99999	030601	1	1028	7	0	0	0	158	0	0	0	0
Polygon	1254	06017	030601	1029	060170306011029	017	92190	99999	030601	1	1029	6	0	0	0	158	0	0	0	0
Polygon	1255	06017	030601	1030	060170306011030	017	92190	99999	030601	1	1030	5	0	0	0	158	0	0	0	0
Polygon	1256	06017	030601	1031	060170306011031	017	92190	99999	030601	1	1031	39	0	0	0	158	0	0	0	0

Figure 12.